

CLAIMS

1. An organism simulation device comprising:

two or more different simulator parts that calculate the behavior of an
5 organism's structural elements, which are the elements making up the organism,
such as molecules, cell organelles, cells, tissue, and organs;

a data output part that outputs simulation results; and

a simulation controller that controls a transfer of data between the two or
more different simulator parts and the data output part;

10 wherein the two or more simulator parts comprise:

an input data reception unit for receiving data from a user and/or
the simulation controller;

a calculation unit for performing predetermined calculations on
the data received by the input data reception unit to create output data; and

15 an output data output unit for transferring the output data to the
simulation controller;

wherein the data output part comprises:

an output data reception unit for receiving output data from the
simulation controller; and

20 an output unit for outputting the output data received by the
output data reception unit; and

wherein the simulation controller comprises:

a simulation scenario information storage unit storing simulation
scenario information, which is information on the flow of data between the two or
25 more simulator parts and the data output part, and the operation sequence;

a data reception unit for receiving data from the two or more simulator parts;

an input data transfer unit for transferring the data received by the data reception unit to the simulator parts based on the simulation scenario information; and

an output data transfer unit for transferring the data that have been received from the two or more simulator parts to the data output part based on the simulation scenario information.

2. The organism simulation device according to claim 1, wherein the output unit of the data output part displays the output data received by the output data reception unit.

3. The organism simulation device according to claim 1, wherein the data output part further comprises:
an input data obtaining unit for obtaining input data to be input to the simulator parts;

wherein the output unit saves the output data received by the output data reception unit and the input data obtained by the input data obtaining unit as a pair.

4. The organism simulation device according to claim 3, further comprising:
an output data reception portion that receives an input of output data;
an input data retrieve portion that retrieves input data that pair with the output data that are received by the output data reception portion, or with output

data that approximate the output data that are received by the output data reception portion; and

an input data output portion that outputs the input data that have been retrieved by the input data retrieve portion.

5

5. The organism simulation device according to any one of claims 1 to 4, further comprising:

a simulation scenario information input reception portion that receives an input of the simulation scenario information; and

10

a simulation scenario information save portion that saves the simulation scenario information that is received by the simulation scenario information input reception portion on the simulation scenario information storage unit.

6. The organism simulation device according to any one of claims 1 to 5,

15

wherein one simulator part of the two or more different simulator parts is a simulator part that performs a simulation of a single myocardial cell, and

another simulator part is a simulator part that calculates a deformation of an organ.

20

7. The organism simulation device according to any one of claims 1 to 6,

wherein the simulation scenario information includes send/receive destination information that indicates where information is to be transmitted to and received from, and command information that indicates a command.

25

8. An organism simulation program comprising:

two or more different simulator programs that cause a simulation to be performed, and that cause the computer to calculate the behavior of an organism's structural elements, which are the elements making up the organism, such as molecules, cell organelles, cells, tissue, and organs;

5 a data output program that causes a computer to output simulation results; and

 a simulation control program that causes a computer to control a transfer of data between the two or more different simulator programs and the data output program;

10 wherein the two or more simulator programs comprise:

 an input data reception step of receiving data from a user and/or the simulation control program;

 a calculation step of performing predetermined calculations on the data received in the input data reception step to create output data; and

15 an output data output step of transferring the output data to the simulation control program;

 wherein the data output program comprises:

 an output data reception step of receiving output data from the simulation control program; and

20 an output step of outputting the output data received by the output data reception step; and

 wherein the simulation control program comprises:

 a data reception step of receiving data from the two or more simulator programs;

25 an input data transfer step of transferring the data received by the

data reception step to the simulator programs based on simulation scenario information that is stored; and

an output data transfer step of transferring the data that have been received from the two or more simulator programs to the data output
5 program based on the simulation scenario information.

9. The program according to claim 8,

wherein the output step of the data output program displays the output data received in the output data reception step.

10

10. The program according to claim 8,

wherein the data output program further causes a computer to execute an input data obtaining step of obtaining input data to be input to the simulator prgorams;

15

wherein in the output step, the output data received in the output data reception step and the input data obtained in the input data obtaining step are saved as a pair.

11. The program according to claim 10, further causing a computer to execute:

20

an output data reception step of receiving an input of output data;

an input data retrieve step of retrieving input data that pair with the output data that are received in the output data reception step, or with output data that approximate the output data that are received in the output data reception step; and

25

an input data output step of outputting the input data that have been

retrieved in the input data retrieve step.

12. The program according to any one of claims 8 to 11, further causing a computer to execute:

5 a simulation scenario information input reception step of receiving an input of the simulation scenario information; and

a simulation scenario information save step of saving the simulation scenario information that is received in the simulation scenario information input reception step.

10

13. The program according to any one of claims 8 to 12,

wherein one simulator program of the two or more different simulator programs is a simulator program that performs a simulation of a single myocardial cell, and

15 another simulator program is a simulator program that calculates a deformation of an organ.

14. The program according to any one of claims 8 to 13,

20 wherein the simulation scenario information includes send/receive destination information that indicates where information is to be transmitted to and received from, and command information that indicates a command.

15. An organism simulation system comprising:

25 two or more different simulator part devices that calculate the behavior of an organism's structural elements, which are the elements making up the

organism, such as molecules, cell organelles, cells, tissue, and organs;

a data output part device that outputs simulation results; and

a simulation control device that controls a transfer of data between the two or more different simulator part devices and the data output part device;

5 wherein the two or more simulator part devices comprise:

an input data reception unit for receiving data from a user and/or the simulation control device;

a calculation unit for performing predetermined calculations on the data received by the input data reception unit to create output data; and

10 an output data output unit for sending the output data to the simulation control device;

wherein the data output part device comprises:

an output data reception unit for receiving output data from the simulation control device; and

15 an output unit for outputting the output data received by the output data reception unit; and

wherein the simulation control device comprises:

a simulation scenario information storage unit storing simulation scenario information, which is information on the sending and receiving of data
20 between the two or more simulator part devices and the data output part device, and the operation sequence;

a data reception unit for receiving data from the two or more simulator part devices;

25 an input data transfer unit for sending the data received by the data reception unit to the simulator part devices based on the simulation scenario

information; and

an output data transfer unit for sending the data that have been received from the two or more simulator part devices to the data output part device based on the simulation scenario information.